

Amendments to the Claims

This listing of the claims replaces all prior versions and listing of the claims in the present application.

Listing of Claims

1-99. (canceled)

100. (new) A location service system for locating a target mobile terminal, comprising:

a client terminal which transmits a location request specifying the target mobile terminal, requested accuracy and requested allowable age;

a positioning system which produces location information of the target mobile terminal; and

a gateway which transmits the location request to the positioning system and stores previously obtained location information of the target mobile terminal,

wherein the gateway performs a first privacy check in response to the location request from the client terminal, and if the stored location information satisfies the requested accuracy and the requested allowable age, then performs a second privacy check without transmitting the location request to the positioning system in order to decide whether the gateway can transmit the stored location information to the client terminal.

101. (new) The location service system of claim 100, wherein said gateway system transmits a notification message to said target mobile terminal.

102. (new) The location service system of claim 101, wherein said gateway network stores a privacy profile of said target mobile terminal, and transmits said notification message to said target mobile terminal if said privacy profile indicates that said notification message is to be sent to said target mobile terminal.

103. (new) The location service system of claim 100, wherein said gateway transmits a verification request message to said target mobile terminal and receives a verification report from the target mobile terminal to determine if the verification report allows said stored location information to be forwarded to said client terminal.

104. (new) The location service system of claim 103, wherein said gateway stores a privacy profile of said target mobile terminal, and transmits said verification request message to said target mobile terminal if said privacy profile indicates that said location request is to be verified by said target mobile terminal.

105. (new) A location method of a location service system for locating a target mobile terminal, comprising:

transmitting, at a client terminal, a location request specifying the target mobile terminal, requested accuracy and requested allowable age;

transmitting, at a gateway which stores previously obtained location information of the target mobile terminal, the location request to a positioning system which produces location information of the target mobile terminal in response to the location request from the gateway;

performing, at the gateway, a first privacy check in response to the location request from the client terminal; and

performing, at the gateway, a second privacy check in order to decide whether the gateway can transmit the stored location information to the client terminal skipping the step of transmitting the location request to the positioning system if the stored location information satisfies the requested accuracy and the requested allowable age.

106. (new) The method of claim 105, wherein the performing of the second privacy check comprises the step of transmitting a notification message to said target mobile terminal.

107. (new) The method of claim 106, further comprising storing a privacy profile of said target mobile terminal, and wherein the performing of the second privacy check comprises determining if the privacy profile of the target mobile terminal indicates that said notification message is to be sent to said target mobile terminal.

108. (new) The method of claim 105, wherein the performing of the second privacy check comprises:

transmitting a verification request message to said target mobile terminal;

receiving a verification report from the target mobile terminal; and

determining if the verification report allows said last known location information to be forwarded to said client terminal.

109. (new) The method of claim 108, further comprising storing a privacy profile of said target mobile terminal, and wherein the performing of the second privacy check comprises determining if the privacy profile of the target mobile terminal indicates that said location request is to be verified by said target mobile terminal.

110. (new) A gateway of a location service system for locating a target mobile terminal, the system comprising:

a client terminal which transmits a location request specifying the target mobile terminal, requested accuracy and requested allowable age; and

a positioning system which produces location information of the target mobile terminal in response to the location request from the gateway,

wherein the gateway stores previously obtained location information of the target mobile terminal, transmits the location

request to the positioning system, performs a first privacy check in response to the location request from the client terminal, and if the stored location information satisfies the requested accuracy and the requested allowable age, then performs a second privacy check without transmitting the location request to the positioning system in order to decide whether the gateway can transmit the stored location information to the client terminal.

111. (new) The gateway of claim 110, wherein said gateway transmits a notification message to said target mobile terminal, and subsequently forwards the stored location information to said client terminal.

112. (new) The gateway of claim 111, wherein said gateway stores a privacy profile of said target mobile terminal, and transmits said notification message to said target mobile terminal if said privacy profile indicates that said notification message is to be sent to said target mobile terminal.

113. (new) The method of claim 110, wherein said gateway transmits a verification request message to said target mobile terminal, receives a verification report from the target mobile terminal, and determines if the verification report allows the stored location information to be forwarded to the client terminal.

114. (new) The method of claim 113, wherein said gateway stores a privacy profile of said target mobile terminal, and

transmits said verification request message to said target mobile terminal if said privacy profile indicates that said location request is to be verified by said target mobile terminal.